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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,883	02/22/2002	Alain Bouchard	8541-GDM	2572

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POLAROID CORPORATION
PATENT DEPARTMENT
1265 MAIN STREET
WALTHAM, MA 02451

EXAMINER

FEGGINS, KRISTAL J

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/080,883	Applicant(s) BOUCHARD ET AL.	
	Examiner K. Feggins	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
4a) Of the above claim(s) 14-51 and 61-91 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12,13,59 and 60 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10,52,53 and 55-57 is/are rejected.
- 7) ☐ Claim(s) 5,11,54 and 58 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/11/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 14-51, 61-91 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No./date November 3, 2003.

Applicant's election with traverse of species 1, in Paper No. date November 3, 2003 is acknowledged. The traversal is on the ground(s) that the species are closely related. This is not found persuasive because the claims have mutually exclusive characteristics.

The requirement is still deemed proper and is therefore made FINAL.

This application contains claims 14-51, 61-91 drawn to an invention nonelected with traverse in Paper No. date November 3, 2003. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1- 3, 52, 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0105573 A1) in view of Sato (US 5,729,274).

Fujimoto et al. disclose the following claimed limitations:

- * regarding claim 1, a thermal printer and method (Abstract);
- * dot size varying means for varying perceived levels of color printed by the thermal printer by varying sizes of dots printed by the plurality of thermal print heads (figs 5a-5f, para 0013, 0016, 0017, 0036, 0040, 0041, 0054, 0055).

- * regarding claim 3, wherein the plurality of colors comprises cyan, magenta, and yellow (para 0055).

Fujimoto et al. do not disclose the following claimed limitations:

- * regarding claim 1, a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors ();

- * regarding claim 2, wherein a one of plurality of thermal print heads has a first number of thermal elements that is energizable at a first rate, wherein a second one of the plurality of thermal print heads has a second one of the plurality of thermal print heads has a second number of thermal elements that is energizable at second rate, the first number being different than the second number, the first rate being different from second rate.

Sato discloses the following:

- * a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors (Abstract, figs 1, 2, 3A-D, 9A-C, 10A-C, 11A-C) for the purpose of providing a one pass color thermal printer.

* regarding claim 2, wherein a one of plurality of thermal print heads has a first number of thermal elements that is energizable at a first rate, wherein a second one of the plurality of thermal print heads has a second one of the plurality of thermal print heads has a second number of thermal elements that is energizable at second rate, the first number being different than the second number, the first rate being different from second rate (Abstract, figs 1, 2, 3A-D, 9A-C, 10A-C, 11A-C) for the purpose providing a one pass thermal printer for achieving multi-color printing while be able to change the drive times of each color.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors; and one of plurality of thermal print heads has a first number of thermal elements that is energizable at a first rate/heating time period/, wherein a second one of the plurality of thermal print heads has a second one of the plurality of thermal print heads has a second number of thermal elements that is energizable at second rate/heating time period/, the first number being different than the second number, the first rate being different from second rate, taught by Sato into Fujimoto et al. for the purpose of providing a one pass color thermal printer and providing a one pass thermal printer for achieving multi-color printing while be able to change the drive times of each color.

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4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0105573 A1) as modified by Sato (US 5,729,274) as applied to claim 1 above, and further in view of Suzuki et al. (US 6,106,173).

Fujimoto et al. as modified by Sato disclose all of the claimed limitations except for the following:

* regarding claim 4, wherein the plurality of colors further comprises black (although it is known in the art to achieve black by way of cyan, magenta and yellow)

Suzuki et al. disclose the following claimed limitations:

* regarding claim 4, wherein the plurality of colors further comprises black (col 2, lines 33-36) for the purpose of providing a printer where images can be quickly formed on the image-forming sheet at a low cost, without producing a large amount of waste material.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize the plurality of colors further comprises black, taught by Suzuki et al. into Fujimoto et al. as modified by Sato for the purpose of providing a one pass color thermal printer and providing a one pass thermal printer for achieving multi-color printing while be able to change the drive times of each color.

5. Claim 6 & 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0105573 A1) in view of Arnost et al. (US 6,537,410 B2).

Fujimoto et al. disclose the following claimed limitations:

* regarding claims 6 & 55, a thermal printer and method for use in

* a plurality of thermal print heads being operable to print a distinct one of a plurality of colors, said plurality of thermal of thermal print heads being used to perform a thermal mass transfer,

Fujimoto et al. do not disclose the following claimed limitations:

* method of printing selected from the group consisting of: (1) thermal mass transfer of a dye or pigment containing wax or resin, and (2) thermal mass transfer of an amorphous dye in combination with a thermal solvent.

Arnost et al. disclose the following:

* method of printing selected from the group consisting of: (1) thermal mass transfer of a dye or pigment containing wax or resin, and (2) thermal mass transfer of an amorphous dye in combination with a thermal solvent (Abstract) for the purpose of lowering the temperature at which transfer of the transfer layer occurs.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize a method of printing selected from the group consisting of: (1) thermal mass transfer of a dye or pigment containing wax or resin, and (2) thermal mass transfer of an amorphous dye in combination with a thermal solvent, taught by Arnost et al. into Fujimoto et al. for the purpose of lowering the temperature at which transfer of the transfer layer occurs.

6. Claims 7, 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0105573 A1) as modified by Arnost et al. (US 6,537,410 B2) as applied to claim 6 above, and further in view of Sato (US 5,729,274).

Fujimoto et al. as modified by Arnost et al. disclose all of the claimed limitations except for the following:

- * a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors.

Sato disclose the following

- * a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors (Abstract, figs 1, 2, 3A-D, 9A-C, 10A-C, 11A-C) for the purpose of providing a one pass color thermal printer.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize a plurality of thermal print heads, each plurality thermal print heads being operable to print distinct one of a plurality colors, taught by Sato into Fujimoto et al. as modified by Arnost et al. for the purpose of providing a one pass color thermal printer.

7. Claims 8-10, 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto et al. (US 2002/0105573 A1) as modified by Arnost et al. (US 6,537,410 B2) as applied to claim 6 above, and further in view of Suzuki et al. (US 6,106,173).

Fujimoto et al. as modified by Arnost et al. disclose the following:

- * regarding claim 9, wherein the plurality of colors comprises cyan, magenta, and yellow (para 0055).

Fujimoto et al. as modified by Arnost et al. do not disclose the following:

- * regarding claims 8 & 10, wherein the plurality of colors further comprises black

Suzuki et al. disclose the following claimed limitations:

* wherein the plurality of colors further comprises black (col 2, lines 33-36) for the purpose of providing a printer where images can be quickly formed on the image-forming sheet at a low cost, without producing a large amount of waste material.

It would have been obvious at the time of the invention was made to a person having ordinary skill in the art to utilize the plurality of colors further comprises black, taught by Suzuki et al. into Fujimoto et al. as modified by Arnost et al. for the purpose of providing a one pass color thermal printer and providing a one pass thermal printer for achieving multi-color printing while be able to change the drive times of each color.

Allowable Subject Matter

8. Claims 5, 11, 54 & 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12-13 and 59-60 are allowed.

The primary reason for allowance of claims 12-13 is the inclusion of the limitations of a thermal printer that includes a plurality of thermal heads that performs means for performing tone scale adjustment on an image to be printed; means for performing thermal history correction on the image to be printed; means for performing resistance profile correction on the image to be printed; means for performing dithering on the image to be printed; means for performing halftone dot location adjustment on the image to be printed; and means for performing common mode voltage correction on the image to be printed. It is these limitations found in the claims, as they are claimed in

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the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.


The primary reason for allowance of claims 59-60 is the inclusion of the method steps of a thermal printer that includes a plurality of thermal heads performing scale adjustment on an image to be printed; performing thermal history correction on the image to be printed; performing resistance profile correction on the image to be printed; performing dithering the image to be printed; performing halftone location adjustment image be printed; and performing common mode voltage correction on image to be printed. It is these steps found in the claims, as they are claimed in the combination of that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Communication With The USPTO

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 571-272-2254. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


K. Feggins
March 18, 2004